



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,505	01/28/2004	Jozef Brcka	TAZ-246	3486
37694	7590	09/10/2007		
WOOD, HERRON & EVANS, LLP (TOKYO ELECTRON)			EXAMINER	
2700 CAREW TOWER			ARANCIBIA, MAUREEN GRAMAGLIA	
441 VINE STREET			ART UNIT	PAPER NUMBER
CINCINNATI, OH 45202			1763	
			NOTIFICATION DATE	DELIVERY MODE
			09/10/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

dgoodman@whepatent.com
usptodock@whepatent.com

Office Action Summary	Application No.	Applicant(s)	
	10/766,505	BRCKA, JOZEF	
	Examiner	Art Unit	
	Maureen G. Arancibia	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 6/19/07.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 26-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 26-33 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 April 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Allowable Subject Matter

1. The indication of allowable subject matter in claims 26 and 27 is withdrawn in view of the newly discovered reference(s) to Hama. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 27 recites the limitation "an RF power source connected across the ends of the conductor" in Line 5. There is insufficient antecedent basis for this limitation in the claim, since the recitation of "an inductor having a conductor" that should provide antecedent basis for the recitation of "an RF power source connected across the ends of the conductor" is not made until Line 7 of the claim. For clarity, the recitation of "an RF power source connected across the ends of the conductor" should be made after the recitation of "an inductor having a conductor," as in, for example, Claim 26.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1763

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 26-33 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,089,182 to Hama.

In regards to Claims 26-33, Hama teaches an ICP apparatus (Figure 1) comprising: a vacuum processing chamber 102a (i.e. the interior processing space of outer process container 102), a dielectric window 118d (Column 5, Lines 26-28) having a vacuum chamber side and an outside; an inductor 120 (Figure 2), comprising: a conductor formed of a sheet of electrically conductive material (Column 5, Lines 46-49) in the shape of at least one loop having opposite edges encircling an axis, the sheet having: a gap extending between the opposite edges and defining a pair of terminal ends (center of the inductor 120, and any one of the four ends of the inductor, illustrated at the four corners in Figure 2); and the opposite edges including an inner edge and an outer edge, each having a plurality of cutouts (notches 120a) that require current flowing between the terminal ends to flow around the outside of the cutouts in the inner edge and around the inside of the cutouts in the outer edge, wherein: the cutouts are alternately spaced in the inner and outer opposite edges, the cutouts in the outer edge extend sufficiently radially inward to interrupt the shortest current paths around the outside of the cutouts in the inner edge, the cutouts in the inner edge extend sufficiently radially outward to interrupt the shortest current paths around the inside of the cutouts in the outer edge; the opposite edges thereby define a sinuous serpentine conductive path that alternately curves inwardly around the outside of the cutouts in the inner edge and

Art Unit: 1763

curves outwardly around the inside of the cutouts in the outer edge, in a plurality of oscillations between the terminal ends, and the at least one loop includes a series of segments of alternating high and low cross-sections and widths (the irregularly shaped notches 120a create segments of alternating higher and lower cross-sections and widths; Figure 2); and an RF power source 126 connected across the ends of the inductor (i.e. one terminal end of the inductor is connected to electric supply passage 122a supplying the RF power from RF power source 126, and another terminal end of the inductor is connected to ground line passage 122b). (Figures 1 and 2)

It is implicit in the teachings of Hama that a pair of power source connectors, as broadly recited in the claims, are attached to each of the terminal ends, since the terminal ends are indeed connected to electric supply passage 122a and ground line passage 122b, as discussed above.

It is noted, as discussed above, that the interior processing space 102a of outer process container 102 as taught by Hama is considered to meet the recitation of a vacuum processing chamber in the claims. Process gas supply layer 118d, made of quartz (Column 5, Lines 26-28) is considered to meet the recitation of a dielectric window in the claims, since electromagnetic energy is applied to interior processing space 102a from the inductor 120 through the process gas supply layer 118d (ex. Column 5, Lines 16-65). Process gas supply layer 118d is considered to form part of a chamber wall of interior processing space 102a, as broadly recited in the claims, in that process gas supply layer 118d defines the spatial extent of interior processing space 102a. Process gas supply layer 118d has a chamber-facing side and an outside. The

Art Unit: 1763

inductor is outside of the process gas supply layer 118d (dielectric window) and outside of the interior processing space 102a (vacuum processing chamber) in that it is outside of and sealed off from the interior processing space 102a (above the process gas supply layer 118d; Figure 1). The inductor is provided generally congruent to the process gas supply layer 118d (dielectric window), the widths being generally parallel to the dielectric window and the thicknesses being generally perpendicular to the dielectric window. (Figures 1 and 2; Column 5, Lines 46-49)

Response to Arguments

6. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen G. Arancibia whose telephone number is (571) 272-1219. The examiner can normally be reached on core hours of 10-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maureen G. Arancibia
Patent Examiner
Art Unit 1763



Parviz Hassanzadeh
Supervisory Patent Examiner
Art Unit 1763